

An Empirical Evaluation Of The Technology Cycle Time Indicator As A Measure Of The Pace Of Technological Progress In Superconducting Technology

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Summary

The technology cycle time indicator (TCT) is a new measure of technological progress. The TCT is the median age of the patents cited on the front page of a patent document. The measure assumes that the more recent the age of the cited patents, the more quickly one generation of inventions is replacing another. The main purpose of the study was to evaluate the TCT in a dynamic context to determine how accurately it measures the pace of technological progress. This study found the trend in TCT changed abruptly from gradually increasing (slowing in cycle time) to steadily decreasing (speeding up in cycle time) following the discovery of high-temperature superconductors. The methodology prescribed in this study could potentially be used in assessing the pace of progress for different technologies or different nations in the same technology

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